STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

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North Carolina Board of Transportation
Environmental Planning and Policy Committee
Meeting Minutes for September 10, 2003

A meeting of the Environmental Planning and Policy Committee (EPPC) was held on September 10, 2003 at 8:30 AM in the Board Room (Room 150) of the Transportation Building. Nina Szlosberg chaired the meeting. Other Board of Transportation members that attended were:

Tom Betts	Andy Perkins
Frank Johnson	Alan Thornburg
Cam McRae	

Other attendees included:

David Allsbrook	Rob Hanson	Zeke Partin
Rob Ayers	Phil Harris	Mike Pettyjohn
Hal Bain	Mike Holder	Allen Pope
Christie Barbee	Julie Hunkins	Rodger Rochelle
Moy Biswas	David Hyder	Ruth Sappie
Marella Buncick	Pay Ivey	Roger Sheats
Roberto Canales	Berry Jenkins	Roy Shelton
Clarence Colemen	Neil Lassiter	Mike Stanley
Donna Dancausse	Emily Lawton	Sheryl Stephens
Craig Deal	Don Lee	Dale Suiter
Shannon Deaton	Robin Little	John Sullivan
Janet D'Ignazio	Ehren Meister	Jay Swain
John Fridell	Mike Mills	Greg Thorpe
C.A. Gardener	Sarah Mitchell	Scott Van Horn
Cherie Gibson	Chris Murray	Frank Vick
Lisa Glover	Jon Nance	Don Voelker
Gail Grimes	Ken Pace	Michael Wood

Ms. Szlosberg called the meeting to order. The meeting minutes were approved as presented. Ms. Szlosberg introduced and welcomed a new board member to the committee, Mr. Andrew M. Perkins, Jr. Mr. Perkins resides in Division 9 and has been appointed to represent mass transit issues.

Ms. Szlosberg opened the meeting by introducing Roberto Canales, State Construction & Materials Engineer, to present the quarterly report on the State Minimum Criteria. Mr. Canales briefly reviewed a handout that

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summarized the projects that have fallen within the criteria. Board Member Frank Johnson asked Ms. Szlosberg how the environmental groups felt about the report. She responded that she wasn't sure but that any record keeping and reporting on this matter is a positive step.

Ms. Szlosberg invited Mr. Roger Sheats, Deputy Secretary for Environment, Planning, and Local Governmental Affairs, to introduce the next set of presenters. Mr. Sheats reiterated the continuing importance of freshwater mussels and introduced John Fridell and Marella Buncick, biologists with the US Fish and Wildlife Service.

Mr. Fridell began by stating that much of his discussion would be a review from a previous committee meeting. It is important to note that the greatest diversity of fresh water mussels occurs in the southeastern United States. Freshwater mussels are considered to be the most endangered group of organisms on the continent. Approximately 12% of our nation's mussel fauna have already been declared extinct. Nationwide over 70% of our native mussels are considered to be either endangered, threatened, or of special concern and in need of conservation to halt their decline. Based on current taxonomy there are about 62 species of native mussels that have been recorded from North Carolina, at least 10 species (16%) have already become extinct or extirpated within the State and 45 species (88% of the surviving species) in North Carolina are considered to be rare and in need of conservation.

Freshwater mussels are extremely important to the health of aquatic systems. They are filter feeders, constantly siphoning and purifying the water. They serve as a major food source for numerous small mammals, birds, fish, and invertebrates. Their shells provide cover, nesting and rearing habitat for aquatic insects, crayfish, and bottom-dwelling fish such as darters, sculpin, and madtoms, which are major prey items for numerous game fish species. Freshwater mussels are one of the best indicators of the health of aquatic systems. They are sensitive to water quality and habitat degradation. They are sedentary and unable to escape impacts to their habitat. Their loss or decline is an indication of water pollution and/or habitat degradation (they are the proverbial "canary in the coal mine" for our streams).

There are many primary threats to mussels including sediment and other pollutants from point and nonpoint sources, channel and habitat alterations from dams, channelization, dredging, hydrologic changes due to filling of the floodplain, loss of forested buffers, and inadequately controlled stormwater runoff. Mr. Fridell then turned the presentation over to Ms. Buncick.

Ms. Buncick noted that her presentation would outline the Ecological Services in NC, briefly summarize the Endangered Species Act, and explain the consultation involved with NCDOT projects. Ecological Services in NC is split into a western and eastern region (in line with DOT divisions) with central field offices in Asheville and Raleigh. There is also a third field station in the Sandhills for the Red Cockaded Woodpecker and related Sandhills conservation efforts.

The Endangered Species Act purpose as stated in the Act, is to provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved. The Act was passed in 1973 and is very comprehensive. There are eighteen sections within the act and three that Ms. Buncick reviewed because of their importance. The three sections include Section 4 – Listing and Recovery, Section 7 – Interagency Coordination and Consultation, and Section 9 – Prohibition against *Take*.

Section 4 – Listing and Recovery includes how a species is listed. The criteria to determine if listing is warranted is:

- Present or threatened destruction, modification, or curtailment of the species' habitat or range
- Over-utilization for commercial, recreational, scientific or educational purposes
- Disease or predation
- Inadequacy of existing regulatory mechanisms
- Other natural or manmade factors affecting the species survival

Ms. Buncick explained the complex process on how a decision to list a species is made. The process that is followed:

- A status review is conducted to determine whether a species warrants federal listing
- Biological information is gathered through cooperation with multiple partners, including state wildlife resource agencies, universities, and private organizations and individuals
- A scientific evaluation determines if listing is recommended
- If recommended, a proposed rule is published in the Federal Register, public comments are received and a decision is made as to whether to list a species
- If the decision is made to list a species, a final rule is published in the Federal Register and the species is protected by the Act
- Finally, critical habitat may be designated for this species

After a species is listed, a recovery plan is developed to improve the population of the species. The plan is developed in cooperation with partner organizations which outlines the current status of the species, its biology, research needs, and recovery goals and strategies.

There are two sections that protect the listed species -- Section 9 and Section 7. Section 9 – Prohibited Acts, prohibits *take*, which is defined as harass, harm, pursue, hunt, wound, shoot, kill, trap, capture, or collect (or to attempt to engage in any such contact). Further, *take* includes changes in habitat which cause harm to listed species. Section 7 – Interagency Cooperation and Consultation, is the final rule published in 1986 (50 CFR, Part 402) and applies to actions funded, authorized, or carried out by federal agencies. There are two subsections of Section 7 that are key to the relationship with NCDOT. The subsections are 7(a)(1) and 7(a)(2).

Section 7(a)(1) states, "…Federal agencies shall, in consultation with and with the assistance of the Secretary, utilize their authorities in furtherance of the purposes of the Act by carrying out programs for the conservation of endangered species…"

Section 7(a)(2) states, "Each federal agency shall, in consultation with and with the assistance of the Secretary, insure that any action authorized, funded, or carried out by such agency is not likely to jeopardize the continued existence of an endangered species or threatened species or result in the destruction or adverse modification of critical habitat…"

Ms. Buncick explained the typical project review process that occurs with NCDOT.

- NCDOT proposes a project
- NCDOT biologists, DEO's, or consultants conduct GIS and field reviews for rare species
- The results of these reviews are summarized in a Natural Resources Technical Report

- NCDOT determines whether or not a project is likely to affect a listed species or its designated critical habitat

Ms. Buncick also made note of the positive relationship that has been built between the two agencies. The staff is very professional and she thanks them for the great work they do on a daily basis.

There are three criteria of "determination of effect" that can be found during the project review process. They are:

- "No effect" – if there are no listed species found and no suitable habitat is affected by the project
- "Not likely to adversely affect" – if there is suitable habitat in the project area but no individuals observed; or species may be present but project as proposed is not expected to result in adverse impact to species or critical habitat
- "May affect, likely to adversely affect" – if effects cannot be avoided or minimized, formal consultation may be required.

Consultation during the process may be informal or formal depending on the determination of effect. " No effect" requires no further consultation and "Not likely to adversely affect" requires written concurrence from the USFWS (this informal consultation meets requirements of the Act). If a "May affect, likely to adversely affect" determination is reached for impacts to a species or its designated critical habitat, formal consultation is required. In this instance, formal consultation sets timelines and information needs and can allow incidental take of listed species, provided the take will not result in jeopardy.

Consultation can be reinstated if a project scope/impacts change significantly, if new species are found or listed, or if new information reveals impacts not previously considered. Ms. Buncick concluded by explaining the importance of early consultation with the USFWS. If early consultation occurs, it allows for creative solutions to avoid or minimize impacts to listed species during project design and often avoids the need for formal consultation, provides opportunities to include conservation measures as part of the project, allows for the joint development of terms and conditions (green-sheet type items), and delivers transportation projects in a timely, cost effective manner while conserving listed species.

Board Member Frank Johnson asked how a species is determined? Mr. Fridell responded that the USFWS does not make the determination and they rely on taxonomists for that information. Mr. Johnson asked where the determination ends because it appears that species on the list continue to become smaller and smaller in visibility. Ms. Buncick commented that to her knowledge there are no bacteria on the list. Mr. Johnson asked about the other natural interferences with mussels such as raccoons and whether these instances are studied and factored. Mr. Fridell replied that these type of instances are being studied and addressed where appropriate. A majority of the efforts being conducted by the USFWS are to conserve what areas of species are left. Mr. Johnson also asked about the identification process. Mr. Fridell noted that some species are very difficult to identify. However, there are people in the state that have these qualifications. There are current efforts to increase the number of those certified to identify difficult species as well. It appears to be more cost effective to train individuals to identify unique species.

Ms. Szlosberg asked if there was a link between declining water quality and mussel populations. Mr. Fridell responded that mussels continue to suffer because of poor water quality, and as a group, aquatic species are currently suffering the worse.

Board Member Cam McRae asked whether the biggest problem is what's being put into the water. Mr. Fridell noted that sedimentation and run off from surrounding land is a serious problem for our water systems. In turn, the runoff has great effect on the hydrology of the stream. The actual footprint of projects (bridge replacements) has little effect on the water quality. It's the secondary and cumulative effects that result in water quality issues – the sedimentation and run off that wash into the stream – which has the greatest impact to water quality. Mr. Sheats noted that it's not always DOT that has to act and be informed but also local governments. It's important to maintain these relationships and educate local governments. Mr. Szlosberg took a brief moment to thank the staff in all agencies for their hard work and dedicated effort to improve these processes and environmental issues. Board Member Alan Thornburg asked how a species becomes delisted. Ms. Buncick responded that it must be open to public comment and be published in the Federal register. Overall, it's very difficult for a species to become delisted because of the public concern involved. It takes over a year to delist.

Ms. Szlosberg called upon Hal Bain, NCDOT Biologist, Office of Natural Environment, to discuss some issues that are being done by NCDOT to accelerate the issues discussed today. There are several research projects that are being addressed by UNC Wilmington to streamline the identifying procedures. Secondly, there is on-going coordination with USFWS, WRC and DOT, to determine a screening process for projects. This should help identify whether a project will require a thorough and complete mussel survey. Thirdly, the Office of Natural Environment staff has received two shell collection permits and the staff is currently applying for a federal permit to collect additional mussels. Finally, a plan to develop training curriculum for training in house staff to identify mussels and fauna. This will be a long-term solution.

Dr. Moy Biswas, State Research & Analysis Engineer, was called upon to briefly present some of the research projects concerning mussels that are being conducted by NCDOT. The department has allocated millions of dollars to environmental research and a variety of that has been for research involving mussels and endangered species. The first research project that was completed for mussels dealt with bridging impacts to mussel populations and what effect occur. In addition to looking at various bridge types, the research has also studied the impacts of culverts. Much of this research is on-going.

Additional research is currently being conducted on mussels for the use of its body fluids (DNA) in identification procedures. This research is being conducted by UNCW.

Ms. Szlosberg thanked those who attended the meeting and accepted a motion to adjourn.

The next meeting for the Environmental Planning and Policy Committee is scheduled for Wednesday, November 5, 2003 at 8:30 AM in the Board Room (Room 150) of the Transportation Building.

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